

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An apparatus for generating a workflow for making image recording media recorded with images expressed by page data from the page data described in page description language, comprising:

a designator for designating attributes of the image recording media constituting a finally resulting matter resulting ~~[[due to]]~~ from processing based on the workflow to be created;

a workflow creator for creating the workflow by deciding upon processes required ~~in~~ order to make the image recording media and parameter values for the required processes based on the attributes designated by the designator;

a ticket creator for creating a job ticket indicating content of each of the required ~~processes~~ ~~process~~ ~~required~~ to make the image recording media based on the workflow created by the workflow creator;

a display having a prescribed screen;

a pointing device operated by a user for designating positions ~~[[of]]~~ on the prescribed screen; and

a display controller,

wherein the workflow creator comprises:

a rule storage unit for storing rules, bringing processes required to construct the workflow and parameter values for the processes into correspondence with each attribute selectable for the image recording media, for creating the workflow for making the image recording media, in advance;

an environmental information storage unit for storing in advance environmental information indicating an environment relating to each processor module for executing each process capable of being selected for making the image recording media; and

a process content decider for ~~deciding upon~~ determining a processor module required to make the image recording media and parameter values for the required processor ~~modules~~ module based on attributes designated by the designator by referring to the rules and the environmental information ~~based on~~ associated with the attributes designated by the designator, ~~[[;]]~~ wherein:

the display controller displays a plurality of icons indicating the respective attributes selectable for the image recording media constituting the finally resulting matter at the display, ~~[[;]]~~

the designator registers an attribute indicated by a selected icon as an output requirement when one of the plurality of icons is selected ~~due to an~~ based on operation of the pointing device, ~~[[;]]~~

the workflow creator creates a workflow based on attributes each registered as the output requirement, ~~[[;]]~~

the attributes designated as attributes of the image recording media by the designator include at least one of the type of image recording media to be made as the finally resulting matter, number of items, size, variety of colors, presence or absence of a trap, ~~[[and]]~~ or imposition method, ~~[[;]]~~

the rules stored in the rule storage unit include: a first rule executed when output is to paper, a second rule executed when page size and paper size are designated as the output

requirement, a third rule executed when a trap is set as the output requirement, and a fourth rule executed when a special color is set as the output requirement,

the first rule being a rule in which each module for input processing RIP operation processing and printer processing is prepared,

the second rule being a rule in which the designated size of paper is designated from a magazine as a printer processing parameter, an output size taken as an RIP operation process parameter is set as the designated size, an area for an image file comprising bit map data obtained by the RIP operation processing is reserved in an auxiliary storage, and a module for an imposition layout process is inserted and the number of pages to be printed simultaneously and a position on the paper of the pages to be printed simultaneously are calculated based on the page size and paper size designated by the output requirement,

the third rule being a rule in which a trap processor module is inserted,

the fourth rule being a rule in which special colors are considered in the RIP operation and in a trap processing, and the number of press plates is specified taking the special colors into consideration,

the first to fourth rules being referred to based on the output requirement constituted by attribute values for the finally resulting matter,[[;]] and

when the workflow creator creates a workflow, the display controller displays the created workflow [[at]] on the display.

2 – 4. (Cancelled)

5. (Previously Presented) The apparatus of claim 1, wherein:

the display controller displays a first area displaying a plurality of icons indicating the respective selectable attributes, a second area displaying icons indicating attributes registered as

output requirements, and a third area displaying the created workflow in a distinguishable manner at the screen and

when one of the icons displayed at the first area is dragged and dropped to the second area by the pointing device, the designator registers the attribute indicated by the dragged and dropped icon as an output requirement.

6. (Original) The apparatus of claim 5, wherein:

when one of the icons registered as an output requirement displayed in the second area is double-clicked using the pointing device, the display controller separately displays an operation screen for setting detailed content for the attribute indicated by the double-clicked icon at the display, and

the designator registers detailed content set based on user operations of the separately displayed operation screen as output requirements.

7. (Previously Presented) The apparatus of claim 1, wherein when one of the plurality of icons indicating the respective selectable attributes is double-clicked by the pointing device, the designator registers the attribute indicated by the double-clicked icon as output requirements.

8. (Original) A printing and prepressing manufacturing system comprising the apparatus of claim 1

and further comprising an executor for executing processing on the page data based on the workflow created by the workflow creator so as to make the image recording media with attributes designated by the designator.

9. (Previously Presented) A printing and prepressing manufacturing system comprising the apparatus of claim 1 and further comprising:

a ticket storage unit for storing tickets generated by the ticket creator, and
an executor for issuing tickets saved at the ticket storage unit when new page data is obtained and executing processing of the content indicated by the issued ticket on the new page data so that the image recording media having attributes designated by the designator is made.

10. (Currently Amended) A computer-implemented method for generating a workflow for making image recording media recorded with images expressed by page data from the page data described in page description language, comprising the steps of:

designating attributes of the image recording media constituting finally resulting matter resulting due to processing based on the workflow to be created;

creating the workflow by deciding upon processes required in order to make the image recording media and parameter values for the required processes based on designated attributes;

displaying a plurality of icons indicating the respective attributes selectable for the image recording media constituting the finally resulting matter at a display having a prescribed screen;

registering an attribute indicated by a selected icon as an output requirement when one of the plurality of icons is selected due to an operation of a pointing device operated by a user for designating positions of the screen; and

creating a job ticket indicating content of processes required to make the image recording media based on the workflow created in the workflow creating step,

wherein the workflow creating step comprises the steps of:

reading rules, bringing processes required to construct the workflow and parameter values for the processes into correspondence with each attribute selectable for the image recording media, for creating the workflow for making the image recording media;

reading environmental information indicating an environment for relating to each processor module executing each process capable of being selected for making the image recording media;

deciding upon processor module required to make the image recording media and parameter values for the required processor modules based on the designated attributes by referring to the rules and the environmental information based on the attributes designated in the designating step; and

creating a workflow based on attributes each registered as the output requirement;

the attributes designated as attributes of the image recording media in the designating step include at least one of the type of image recording media to be made as the finally resulting matter, number of items, size, variety of colors, presence or absence of a trap, and imposition method;

the rules include: a first rule executed when output is to paper, a second rule executed when page size and paper size are designated as the output requirement, a third rule executed when a trap is set as the output requirement, and a fourth rule executed when a special color is set as the output requirement,

the first rule being a rule in which each module for input processing RIP operation processing and printer processing is prepared,

the second rule being a rule in which the designated size of paper is designated from a magazine as a printer processing parameter, an output size taken as an RIP operation process parameter is set as the designated size, an area for an image file comprising bit map data obtained by the RIP operation processing is reserved in an auxiliary storage, and a module for an imposition layout process is inserted and the number of pages to be printed simultaneously and a

position on the paper of the pages to be printed simultaneously are calculated based on the page size and paper size designated by the output requirement,

the third rule being a rule in which a trap processor module is inserted,

the fourth rule being a rule in which special colors are considered in the RIP operation and in a trap processing, and the number of press plates is specified taking the special colors into consideration,

the first to fourth rules being referred to based on the output requirement constituted by attribute values for the finally resulting matter;

when the workflow creating step creates a workflow, a display controller displays the created workflow [[at]] on the display; and

the above steps are performed by one or more computers programmed to perform the above steps.

11 – 12. (Canceled)

13. (Currently Amended) A non-transitory computer-readable recording medium having recorded therein a program for generating a workflow for making image recording media recorded with images expressed by page data from the page data described in page description language, the program, when executed by a computer, causing the computer to perform the steps of:

designating attributes of the image recording media constituting finally resulting matter resulting due to processing based on the workflow to be created;

creating the workflow by deciding upon processes required in order to make the image recording media and parameter values for the required processes based on designated attributes;

displaying a plurality of icons indicating the respective attributes selectable for the image recording media constituting the finally resulting matter at a display having a prescribed screen;

registering an attribute indicated by a selected icon as an output requirement when one of the plurality of icons is selected due to an operation of a pointing device operated by a user for designating positions of the screen; and

creating a job ticket indicating content of processes required to make the image recording media based on the workflow created in the workflow creating step,

wherein the workflow creating step comprises the steps of:

reading rules, bringing processes required to construct the workflow and parameter values for the processes into correspondence with each attribute selectable for the image recording media, for creating the workflow for making the image recording media;

reading environmental information indicating an environment relating to each processor module for executing each process capable of being selected for making the image recording media;

deciding upon processor module required to make the image recording media and parameter values for the required processor modules based on the designated attributes by referring to the rules and the environmental information based on the attributes designated in the designating step; and

creating a workflow based on attributes each registered as the output requirement;

the attributes designated as attributes of the image recording media in the designating step include at least one of the type of image recording media to be made as the finally resulting matter, number of items, size, variety of colors, presence or absence of a trap, and imposition method;

the rules include: a first rule executed when output is to paper, a second rule executed when page size and paper size are designated as the output requirement, a third rule executed when a trap is set as the output requirement, and a fourth rule executed when a special color is set as the output requirement,

the first rule being a rule in which each module for input processing RIP operation processing and printer processing is prepared,

the second rule being a rule in which the designated size of paper is designated from a magazine as a printer processing parameter, an output size taken as an RIP operation process parameter is set as the designated size, an area for an image file comprising bit map data obtained by the RIP operation processing is reserved in an auxiliary storage, and a module for an imposition layout process is inserted and the number of pages to be printed simultaneously and a position on the paper of the pages to be printed simultaneously are calculated based on the page size and paper size designated by the output requirement,

the third rule being a rule in which a trap processor module is inserted,

the fourth rule being a rule in which special colors are considered in the RIP operation and in a trap processing, and the number of press plates is specified taking the special colors into consideration,

the first to fourth rules being referred to based on the output requirement constituted by attribute values for the finally resulting matter; and

when the workflow creating step creates a workflow, a display controller displays the created workflow on the display.

14 – 15. (Canceled)